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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,389	04/14/2004	Alberto Patarchi	163-545	6413
47888	7590	08/20/2007		
HEDMAN & COSTIGAN P.C. 1185 AVENUE OF THE AMERICAS NEW YORK, NY 10036			EXAMINER NGUYEN, HANH N	
			ART UNIT 2834	PAPER NUMBER
			MAIL DATE 08/20/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/824,389

Applicant(s)

PATARCHI, ALBERTO

Examiner

Nguyen N. Hanh

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendments filed 6/12/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5-7, 10-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esswein (US 5327032, supplied by applicant).

With respect to claim 1, Esswein teaches an electric motor comprising: A stator (Fig. 2, #38), a single body magnetic induction core (Fig. 6, #10) constrained to said stator (by way of mounting block: Fig. 2, #12), at least one coil of magnetic excitation (Fig. 2, #34) associated to said induction core, a rotor (Fig. 2, #18) of substantially cylindrical shape comprising at least one permanent magnet (Fig. 2, #28) adapted to form on said rotor at least two magnetic poles of opposite polarity, said single body magnetic induction core and said at least one coil being adapted to form at least two magnetic induction poles of opposite polarity on said single body induction core, which is produced in a single body (as seen in Figs. 1 & 6) and comprises a circular central hole for housing said rotor, a ring-shaped air gap (of the type as seen in Fig. 2) between said rotor and

Art Unit: 2834

said single body induction core, at least two opposing extensions adapted to form said at least two magnetic induction poles in opposite position from each other and in proximity to said circular central hole, at least two opposing and external magnetic separation notches (Fig. 6, #22a,24a,26a) on the entirety of (as seen in Fig. 6) an outer surface of said single body induction core, said external magnetic separation notches being alternately arranged with respect to said extensions, adapted to generate a magnetic separation between two adjacent, opposite-sign poles of the single body magnetic induction core, such that the rotor is arranged with each magnetic pole between two adjacent poles of the single body magnetic induction core when the motor is de-energized (as seen in Fig. 5).

Esswein fails to show at least two opposing extensions are further characterized in that they are an integrally formed part of the single body magnetic core. However, it would have been obvious at the time the invention was made to a person having an ordinary skill in the art to make two opposing extensions as an integrally part of the single body magnetic core, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard V. Detroit Stove Works*, 150 U.S. 164 (1983).

With respect to claim 5, Esswein teaches the motor of claim 1, wherein said induction core comprises two opposing extensions (Fig. 2, #30).

Art Unit: 2834

With respect to claim 6, Esswein teaches the motor of claim 5, wherein said rotor comprises two opposing permanent magnets (as seen in Fig. 2).

With respect to claim 7, Esswein teaches the motor of claim 1, but it does not teach that said rotor comprises a single permanent magnet with alternate poles arranged on the side surface of said rotor. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the two rotor magnets of Esswein into one unitary magnet since it has been held that "the use of a one piece construction...would be merely a matter of obvious engineering choice." (In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965)).

With respect to claim 10, Esswein teaches the motor of claim 1 wherein electrical energy is gained by the ends of the induction coils when mechanical energy is applied to the rotation axis (which is inherent to all dynamoelectric machines of the type that is taught by Esswein).

With respect to claim 11, Esswein teaches the motor of claim 1, but it does not teach that permanent magnets are secured by insertion. However, inserting magnets into rotors was well known in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to secure permanent magnets to the motor of Esswein using insertion because it provides a means for attaching magnets to a motor without the use of adhesives or external fasteners.

With respect to claim 12, Esswein teaches the motor of claim 1 wherein a coil is associated with the induction pole.

With respect to claim 14, Esswein teaches the motor of claim 1, but it does not specifically teach that a polarity exchange is carried out with a brush manifold. However, brush manifolds (brushes and commutators) were very well known in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a brush manifold to implement a polarity exchange in the motor of Esswein because brush manifolds are one of the oldest and most basic methods for controlling polarity exchanges in DC motors.

3. Claims 3 & 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esswein (US 5327032 supplied by applicant) in view of Horst (EP 0676853 supplied by applicant).

With respect to claim 3, Esswein teaches the motor of claim 1, but it does not teach that said induction core comprises four equidistant extensions. However, Horst teaches a similar motor with four equidistant extensions (Fig. 3, #18a-d), and Esswein teaches that multiple extensions may be used (Col. 3, Lines 62-68). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the motor of Esswein in view of the motor as taught by Horst because it has more starting torque than other motors (Horst, Abstract).

With respect to claim 4, Esswein in view of Horst teaches the motor of claim 3, and Horst teaches that said rotor comprises four equidistant permanent magnets (Fig. 3, #24a-d).

4. Claims 8 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Esswein (US 5327032, supplied by applicant) in view of Mavidia et al. (EP 0342733, supplied by applicant). Esswein teaches the motor of claim 1, by it does not teach that said motor further comprises a hall-effect sensor adapted to control the position of the rotor. However, Mavidia teaches a hall-effect sensor (Fig. 8, #150) in a similar motor. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the motor of Esswein in view of the sensor as taught by Mavidia because it provides a means for determining relative angular displacement of a motor's rotor (Col. 5, Lines 11-16).

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Esswein (US 5327032, supplied by applicant) in view of Mavidia et al. (EP 0342733, previously cited) further in view of Mayes et al. (EP 0892490, supplied by applicant). Esswein in view of Mavidia teaches the motor of claim 8, but it does not teach that said polarity sensor is optical. However, Mayes teaches a motor using an optical sensor (Col. 3, Lines 6-13). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the sensor of Mavidia in view of the sensor as taught by Mayes as merely a substitution of known equivalent position sensors (Col. 3, Lines 6-13).

Response to Arguments

6. Applicant's arguments filed on 6/12/2007 have been fully considered but they are not persuasive. The applicant's argument is on the ground that the reference the Examiner relies on, Esswein, fails to show "two opposing and

Art Unit: 2834

external magnetic separation notches on the entirety of an outer surface of said induction core" because Fig. 1 shows an "un-slotted area" in the axial length.

The Examiner respectfully disagrees with the Applicant because the Examiner relies on the second embodiment shown in Fig. 6 to read on the notches of claim

1. For the reasons explained above, the rejection is still deemed proper.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information on How to Contact USPTO

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is

Art Unit: 2834

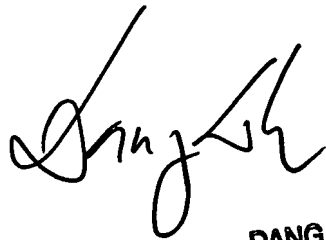
(571) 272-2031. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg, can be reached on (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

August 14, 2007

A handwritten signature in black ink, appearing to read 'Dangle', is written over a rectangular stamp.

**DANGLE
PRIMARY EXAMINER**